



UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/512,962	02/25/00	TERWILLIGER	T S-91,732

HM12/0523

Ray G Wilson
LC BPL MS D412
Los Alamos National Laboratory
P O Box 1663
Los Alamos NM 87545

EXAMINER

HARTTER, A

ART UNIT	PAPER NUMBER
----------	--------------

1631

DATE MAILED:

05/23/01

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)
	09/512,962	TERWILLIGER, THOMAS C.
	Examiner Harter	Art Unit 1631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 2/25/2000.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) _____ is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claims 1-9 are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) Notice of References Cited (PTO-892) 18) Interview Summary (PTO-413) Paper No(s). _____ .
- 16) Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) Notice of Informal Patent Application (PTO-152)
- 17) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 20) Other: _____

Election/Restrictions

DETAILED ACTION

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-5, drawn to modeling methods, classified in class 395, subclass 500.23.
- II. Claims 6-9, drawn to selection methods, classified in class 395, subclass 500.05.

The inventions are distinct, each from the other because of the following reasons:

Inventions from Group I and Group II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are a method for the improvement of X-ray crystallography. Group II is directed towards a method for improving and maximizing the probability that observed knowledge directed towards forming the likelihood of a set of structure factors and then comparing those factors to observed factors.

Groups II and I are distinct, each from the other, for the following reasons. Group I is concerned with the calculations of the formation of an electron density map of a crystalline structure. This map is then applied to the map and the protein and solvent portions of the crystal are identified. The histogram is then derived and fit into a distribution function equation to determine the accuracy of the model.

Group II in contrast effects to achieve a method in which the probability that the derived knowledge is the same as the observed structure factors were formally set forth. This is an attempt to match the observed data to a prior set of structure factors while the former group attempts to mold the incoming data through a series of equations. Group I is not required for the accomplishment of Group I and vice versa. The groups attempt to accomplish their goal through two very distinct methods and thus are separate inventions.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for the examination purposes as indicated is proper. Applicant is advised that the reply to this requirement to be complete must include the election of the invention to be examined even though the requirement be traversed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy Harter whose telephone number is (703) 305-1696. The examiner can normally be reached Monday-Friday from 8:00 to 4:30 p.m. (Eastern Time).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward can be reached at (703) 308-4028. The fax phone numbers for group 1600 is (703) 308-4242 and (703) 305-3014.

Any inquiry of a general nature or relating to the status of this application should be directed to the Patent Analyst, Tina Plunkett, whose telephone number is (703) 305-

Application/Control Number: 09/512,962

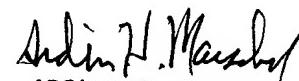
Page 4

Art Unit: 1631

3524 or to the Technical Center receptionist whose telephone number is (703) 308-0196.




ARDIN H. MARSCHEL
PRIMARY EXAMINER


ARDIN H. MARSCHEL
PRIMARY EXAMINER